

ABSTRACT OF THE DISCLOSURE

A system and method for optimizing placement of network equipment and information load in a network over a period of time. A demand input structure having a plurality of demands organized by their time points is provided as an input to a model generator and an optimization processor associated therewith. Starting with the earliest demand set to be serviced by the network, a directed graph network model is obtained by using appropriate transformation techniques. A cost function associated with the network model is constructed using a flow cost term and an equipment cost term. Appropriate constraints are imposed on the cost function for optimization. A solution set comprising network placement information and demand routing information is obtained for a current time point. When the next demand set is taken up for optimization, the network model and associated cost function are recursively updated by using the solution set obtained for the demand set at a prior time point. The recursive optimization process takes place for each of the demand sets provided in the demand input structure in accordance with their time points. Preferably, Priority 1 demands are optimized first. Thereafter, Priority 2 demands are optimized by employing a capacitated shortest path algorithm with respect to each Priority 2 demand presented in its order.